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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/808,741	03/24/2004	Craig Andrew Campbell	G00339/US	5861
35758	7590	11/16/2005		
GKN DRIVELINE NORTH AMERICA, INC 3300 UNIVERSITY DRIVE AUBURN HILLS, MI 48326				
			EXAMINER BINDA, GREGORY JOHN	
			ART UNIT	PAPER NUMBER
			3679	

DATE MAILED: 11/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/808,741	Applicant(s) CAMPBELL, CRAIG ANDREW	
	Examiner Greg Binda	Art Unit 3679	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) 2 and 9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3-8 and 10-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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Election/Restrictions

1. Applicant's election with traverse of Species I (Figs. 1-6) in the reply filed October 7, 2005 is acknowledged. The traversal is on the ground(s) that a search and a substantive analysis of Species I will include the unelected species. This is not found persuasive because it does address the patentability of any one of the species with regard to the other species. Thus applicant has failed to submit valid grounds for overcoming the election requirement. See MPEP § 808.01(a).

2. Claims 2 & 9 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected elected, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on October 7, 2005.

Information Disclosure Statement

3. The listing of a reference in the specification as at paragraph 005 is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the reference has been cited by the examiner on form PTO-892, it has not been considered.

Applicant is advised that the date of any re-submission of any item of information contained in this information disclosure statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements

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based on the time of filing the statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609.05(a).

Drawings

4. The drawings are objected to because:
 - a. They use inappropriate cross hatch patterns to depict the cardboard (26), steel wire mesh (28 & 36), ceramic (30 & 38) and adhesive (32) layers. See MPEP § 608.02 for the appropriate patterns.
 - b. They fail to show the limitations of claims 13 & 14.
5. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will

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be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

6. The disclosure is objected to because:
 - a. An undefined acronym, NVH, is used at paragraph 030.
 - b. At page 9, line 13, the term “mesh 38” should be changed to “mesh 36”.
 - c. Page 9, lines 2-4 states that in Figs. 7 & 8 the “liner 34 may be applied . . . in place of a dampening insert” which means the dampening insert is something other than the liner 34. This contradicts the description at page 8, lines 6 & 7 where it states the dampening insert is a liner. If not the liner 34, what then constitutes the dampening insert in Figs. 7 & 8?
7. The specification is objected to as failing to provide proper antecedent basis for the following claimed subject matter:
 - a. Claims 8 & 18: “stainless steel”
 - b. Claim 11: “a tube-like section”
 - c. Claims 11-16, 19 & 20: “ceramic insert”
 - d. Claims 13 & 14: all limitations therein

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8. The abstract of the disclosure is objected to because it includes improper language. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided.

Claim Rejections - 35 USC § 112

9. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

10. Claims 3-21 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

- a. Claims 3, 16 & 18 recite that the dampening means of the claimed invention comprises a "substantially rigid substrate". However, the specification expressly teaches said means comprising "a flexible substrate" (see page 8, line 9). Furthermore, "a substantially rigid substrate" would preclude the rolling disclosed at page 8, line 17 and Figs. 3-6 and thus preclude assembly of the claimed invention.
- b. Claims 4 & 20 recite the dampening means/insert of the claimed invention is "removable". However, the specification expressly teaches said means is bonded (i.e. non-removable) to the inside surface of a shaft (see page 8, lines 18 & 19 and page 9, line 8).

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c. Claim 11 recites that the claimed invention comprises an insert that is either on or near a surface of a tube section. However, the specification teaches only the insert 24 being attached (i.e. on) a surface of a shaft.

d. Claim 16 recites that the substrate of the insert is "coated with said ceramic".

However, the specification teaches only that the ceramic layer 30 is conformally deposited on the substrate 28 (see page 8, line 12).

11. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

12. Claims 1 & 3-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a. Claims 1 & 10 recite that the dampening means of the claimed invention, a rotary shaft, absorbs "vibration energy of the shaft" and "increases the resonant frequency of bending of the shaft". However, the shaft is defined only as comprising said means. It is not clear how a dampening means absorbs its own vibration energy and increases its own "resonant frequency of bending".

b. Claim 4 recites "the dampening means is removable" but does not recite the element from which said means is removable.

c. Claim 11, line 2 recites the limitation "a tube-like section". The addition of the word "like" to an otherwise definite expression (e.g. a tube section) extends the scope of the

expression so as to render it, as well as the claim, indefinite. *Ex parte Copenhaver*, 109 USPQ 118 (Bd. App. 1955).

d. The term "near" in claim 11 is a relative term which renders the claim indefinite. The term "near" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

e. Claim 13 recites that the insert is arranged at more than one section. However, it is not clear how a single rolled insert could be arranged at separate distinct sections.

f. Claim 16 recites the limitation "said ceramic". There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 101

13. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

14. Claims 1 & 3-21 rejected under 35 U.S.C. 101 because the claimed invention lacks patentable utility. In paragraphs 028 & 029 the utility of the invention is disclosed simply as a means to prevent undesirable noise in a car's passenger compartment when the car is involved in a frontal crash. It is not clear why applicant believes the passenger(s) in a car undergoing a head-on collision would be concerned about noise. It seems the concerns of said passenger(s) would be focused entirely on more pressing matters (e.g. the preservation of life and property, the minimization of adverse health effects, etc.). Unless applicant can show why the noise

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created by a propshaft during a head-on collision is of any concern to those involved and thus should be minimized, there is no patentable utility for this invention.

Claim Rejections - 35 USC § 102

15. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

16. Claims 1 & 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Raquet, US 4,392,681. Figs. 6 & 7 show a rotary shaft for use in a drive line of a motor vehicle comprising an internal dampening means 1-7 to absorb vibration energy of the rotary shaft and increase the resonant frequency of bending of the shaft.

17. Claims 1 & 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Verney, GB 1,463,170. Fig. 1 shows a rotary shaft 1 for use in a drive line of a motor vehicle comprising an internal dampening means 5 to absorb vibration energy of the rotary shaft and increase the resonant frequency of bending of the shaft.

18. Claims 1 & 10 are rejected under 35 U.S.C. 102(b) as being anticipated by SAE Universal Joint and Driveshaft Design Manual. Fig. 7 on p. 235 shows a rotary shaft for use in a drive line of a motor vehicle comprising an internal dampening means (see “untuned internal

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absorber”) to absorb vibration energy of the rotary shaft and increase the resonant frequency of bending of the shaft.

19. Claims 1, 3-5, 7, 8, 10-16 & 19-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Bothwell, US 4,059,712. Figs. 1-3 show a shaft for use in a motor vehicle, the shaft including: a steel tube-like section 2; and a ceramic insert 4 arranged on or near a surface of the tube section along all its sections. Figs. 4-6 show the insert comprises: a heat resistant layer 24, 26; a stainless steel (see also col. 10, lines 49 & 50) wire mesh substrate 14; and a ceramic layer 16 deposited atop the substrate.

Conclusion

20. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kuroki, Rowland and Haile each show a rotary shaft..

21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Greg Binda whose telephone number is (571) 272-7077. The examiner can normally be reached on M-F 9:30 am to 7:00 pm with alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached on (571) 272-7087. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Greg Binda', with a stylized flourish at the end.

Greg Binda
Primary Examiner
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